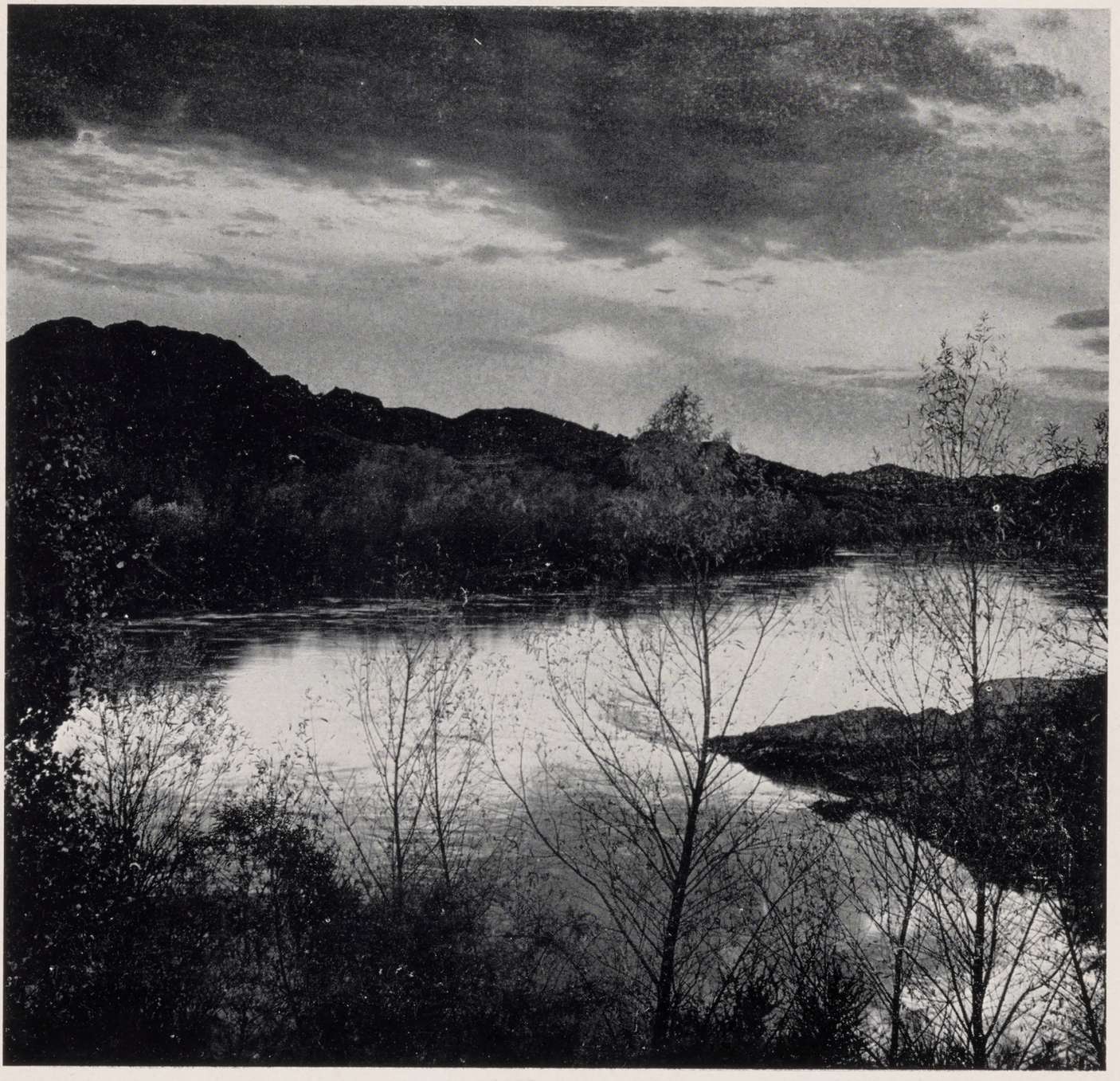
• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. VIII. MARCH 25, 1941 No. 3



An early Spring view of the Colorado River, two miles below Parker Dam, looking southeast from the California shore line. One of the many remarkable water, desert and mountain views to be found in the vicinity of the Colorado River Aqueduct intake.

· COLORADO RIVER ·
AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
306 WEST THIRD ST.
LOS ANGELES, CALIFORNIA

Published monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. VIII March 25, 1941 No. 3

Soft and Filtered Water to Save Money For Homes, Factories

Note—This is a continuation of excerpts of a statement made by Mr. J. M. Montgomery concerning the benefits that are enjoyed by homes and industries using soft and filtered water. Mr. Montgomery is a member of the firm of Hoover and Montgomery, retained by the District as consultants in the designing and building of the new aqueduct Softening and Filtration Plant, At the conclusion of the February installment, Mr. Montgomery had started to tell of the many types of industries benefited by soft water.

In glass making, water cooled walls are used in the glass melting furnaces. If the water is corrosive the pipe walls may be eaten through or if the water is scale forming the tubes will conduct the heat poorly and may eventually close up entirely. In either case great damage may be done.

In paper making, water is used in very large quantities to carry the mixture of fibre, size, alum, etc. to the paper-making machines. Some of the larger companies, operating a number of plants, have found that even though they used exactly the same raw materials they might produce good paper in one plant and an inferior grade in another. The trouble has been traced directly to the quality of the water being used. Oftentimes the amounts of dissolved salts may exceed the amounts of size and alum used.

Textile mills must have soft water in order to be certain of uniform results. Poor water may affect the quality of the washing, processing and dyeing. The water quality is so important in rayon manufacturing that rubber lined filters and softeners and nickel strainer systems and piping are used.

In chemical industries, water is such an important raw material that the ut-

(*Continued on Page* 8.)

Free Soft Water to District Cities During Test Period, June 1 to Aug. 1

For a period of two months prior to August 1, while operating tests are being conducted and line conditioning perfected on the Colorado River Aqueduct's distribution system, cities of the Metropolitan Water District will have the opportunity to secure soft and filtered water without charge.

Acting on authority granted by the District Board of Directors, Vice Chairman Franklin Thomas has sent to the mayors, city councils and water department heads of District cities a letter in which the offer of free aqueduct water officially is made.

Aqueduct distribution facilities serving Anaheim, Beverly Hills, Burbank, Compton, Fullerton, Glendale, Long Beach, Los Angeles, Pasadena, Santa Ana, Santa Monica and Torrance will be completed by or about June 1, the Board states, and in the course of tests conducted on these lines from June 1 to August 1, the offer of free water is made. San Marino, also a District city, is now served by a private water company and has not yet been connected with the District's distribution lines.

In the Board's letter to the District cities it is stated that the District will be able to give regular delivery of soft and filtered water during the testing period. It is further pointed out that the water to be delivered to the cities will be softened to a degree of approximately 85 parts per million, or about 5 grains per gallon, and will be filtered crystal clear. Colorado River Aqueduct water, therefore, it is explained, will be considerably softer than the water now being served in most of the District cities. Beverly Hills is the only one of the thirteen District cities which now serves filtered water.

In its letter to the cities, the District Board announced that the Colorado River Aqueduct system will be placed on an operating basis on August 1. Thereafter, it is stated, water deliveries will be made to District cities in such quantities as may be required at the rate of $15.00 per acre foot, a rate equivalent to 3.5 cents per 100 cubic feet.

General Manager Weymouth states that the operating tests which are to be conducted on the aqueduct's distribution lines and at the District's water softening and filtration plant are an essential part of the construction program to place the system in full readiness for permanent operation. Water passed through the lines during these tests, now offered to the cities without charge, will give individual domestic and industrial consumers the chance to receive the benefits of soft and filtered aqueduct water, District officials state.

Cities which take advantage of the District offer of free aqueduct water during the test period will be able to realize large savings by discontinuing the pumping from local water sources. In addition to these large savings of pumping costs, the local underground water not being drawn off will thus be conserved for future use when and if required, it was pointed out.

(*Continued on Page* 4.)

– DIRECTORY –

BOARD OF DIRECTORS

W. P. Whitsett, Chairman
Franklin Thomas, Vice-Chairman
S. H. Finley, Secretary
Anaheim.....E. P. Hapgood
Beverly Hills....Arthur Taylor
Burbank....James L. Norwood
Compton....Warren W. Butler
Fullerton..Walter Humphreys
Glendale.....Herman Nelson
Long Beach....William M. Cook
Los Angeles.....Otto J. Emme
Los Angeles....Perry H. Greer
Los Angeles.....Joseph Jensen
Los Angeles.....D. W. Pontius
Los Angeles.....
.....John R. Richards
Los Angeles.....
.....Victor H. Rossetti
Los Angeles.....W. P. Whitsett
Pasadena.....Franklin Thomas
San Marino....John H. Ramboz
Santa Ana.....S. H. Finley
Santa Monica.....
.....Samuel G. McClure
Torrance.....Charles T. Rippy
J. M. Luney, Controller
Ira R. Pontius, Treasurer

GENERAL STAFF

General Manager and Chief Engineer....F. E. Weymouth
Asst. Chief Engineer.....
.....Julian Hinds
General Counsel .....
.....James H. Howard
Asst. General Counsel.....
.....Arthur A. Weber
Chief Elec. Engineer.....
.....J. M. Gaylord
Asst. to Gen. Mgr.....
.....Don J. Kinsey
Asst. Controller, G. D. Smith
Asst. Treasurer, C. G. Olson
Secy. to Gen. Mgr.....
.....Elisabeth von Hagen

DIVISION ENGINEERS

Distribution.....R. B. Diemer
Transmission....Robt. N. Allen
Maintenance.....W. J. Neale
Field. Supt. Pumping.....
.....T. T. Walsh

Aqueduct Contracts
Morris Dam Connection
C. M. Elliott and Stroud-Seabrook
M. W. Hongola, Supt.
Distribution System
Softening and Filtration Plant
Griffith Company. Weymouth
Crowell Co., Project Manager.
Olen Evans, Field Supt.
Waste Water Disposal Line
United Concrete Pipe Corporation
Schedule 29P
American Concrete & Steel Pipe Co.
Schedule 30SC
J. F. Shea Co., Inc.
Hollywood Tunnel
J. F. Shea Co., Inc.
Schedule 31P
United Concrete Pipe Corp.
Schedules 32CI, 33CI
Artukovich Bros.
Schedules 34P, 35P, 36P
American Concrete & Steel Pipe Co.
Schedule 37SC
Macco Construction Co.
Schedules 38SC, 39A
Werner & Webb
Schedule 40A
Warren Southwest, Inc.
Schedule 41P
American Concrete & Steel Pipe Co.
Orange County Reservoir
C. G. Willis & Sons, Inc., and Charles G. Willis.



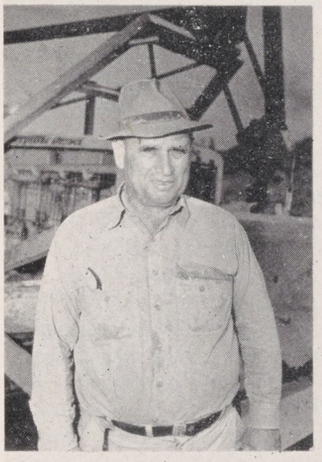
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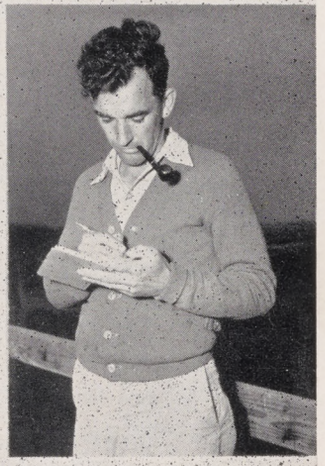
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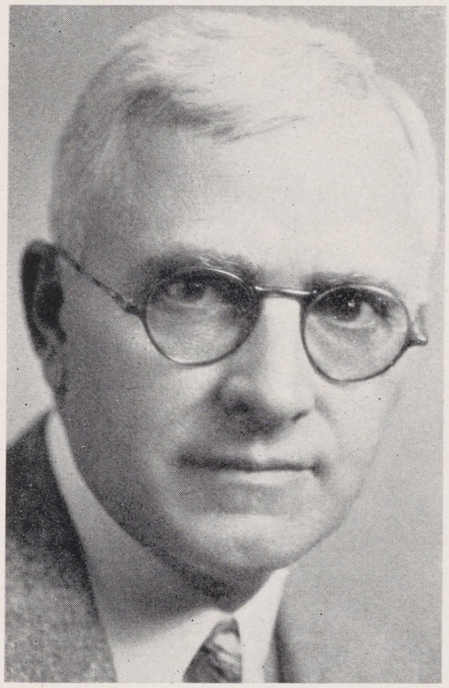
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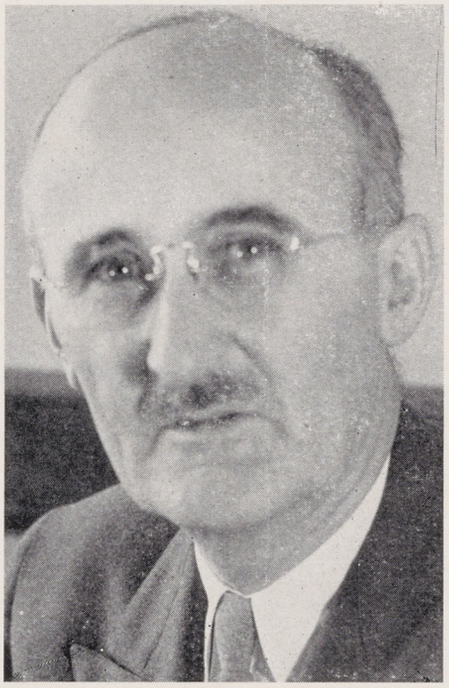
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Winding up the big job. (1) On the Beverly Hills to Santa Monica feeder, (left to right) E. W. Mortensen, Pipe-laying Foreman for Artukovich Bros., contractor, and Tom Day, District Inspector. (2) On the Burbank to Santa Monica line, (left to right) Cliff Taber and L. H. Christensen, District Inspectors. (3) On the Softening and Filtration Plant to Orange County Reservoir line, (left to right) Hollis Page, District Inspector; Clyde Grant, General Foreman for American Concrete & Steel Pipe Company, contractor; and William H. Dunster, District Inspector. (4) C. Monaghan, District Inspector on Burbank to Santa Monica line. (5) At the Softening and Filtration Plant, (standing) J. G. Brown, District Mechanical Foreman; E. W. Koch, District Inspector; Peter de Pace, District Inspector; B. H. Martin, District Resident Engineer; O. E. Evans, E. B. Milnor, T. W. Oglesby and J. R. Parker, Construction Superintendent, Engineer, Foreman, and Timekeeper, respectively, for Griffith Co. (Front row, left to right) C. A. Knoll, District Junior Engineer on Operating Force; Tom Holtom, District Asst. Eng'r.; Wilson A. Pratt, District Inspector; Ralph Davis, District Inspector; William Aultman, District Engineer on Operating Force, and R. C. Kenmir, District Junior Engineer. (6) J. D. Maple, District Inspector, American Concrete and Steel Pipe Co. Plant, South Gate. (7) At the Hollywood Tunnel, (left to right) Lars Christiansen, District Inspector; C. O. Pearson, Wallace Young and H. Ardy, Tunnel Foreman, Superintendent, and Timekeeper, respectively, for J. F. Shea Co., Inc., contractor. (8) On the Beverly Hills to Santa Monica line, (left to right) Ben Hinton and Louis Grossman, District Inspectors; Vido Artukovich, Superintendent for Artukovich Bros., contractor; and Nick Vlacich, Subcontractor on back-fill work. (9) On the Orange County Feeder, (left to right) Don Loucks, District Assistant Engineer; Jerry Artukovich, Superintendent of Artukovich Bros., subcontractor; Red Keithley, District Inspector; Al Anthony and Art Anthony, Assistant Superintendent and Laying Foreman, respectively, for Macco Construction Co., contractor; Jack Hathenbruck and Charley Goetz, District Inspectors.

General Manager Weymouth to Retire Aug. 1; Julian Hinds to Succeed Him



Frank E. Weymouth



Julian Hinds

Acting upon the request of Mr. Weymouth that he be permitted to retire as the General Manager and Chief Engineer of The Metropolitan Water District of Southern California upon the completion of Colorado River Aqueduct construction work on July 31, the Board of Directors of the District has appointed Mr. Weymouth Consulting Engineer for the giant water supply system, effective August 1.

Julian Hinds, who for the past ten years has been the Assistant Chief Engineer of the District, was elected General Manager and Chief Engineer to succeed Mr. Weymouth on August 1.

Mr. Weymouth has been the chief administrative and engineering officer of the Metropolitan Water District ever since it began to function in 1929, and during the same period Mr. Hinds has served as chief designing engineer and Assistant Chief Engineer of the District organization, which is now bringing to completion the 392-mile aqueduct system which has been under construction during the past eight years.

Prior to his selection as the head of the District organization, Mr. Weymouth was for a number of years Chief Engineer of the United States Bureau of Reclamation. During that time he was in charge of the Government's engineering studies which led to the building of Boulder Dam. Previously, Mr. Weymouth had been in charge of the planning and building of a number of reclamation projects throughout the West, including the building of a number of large dams.

Mr. Hinds is nationally recognized as one of America's foremost designing engineers, particularly with reference to water works structures. He was in charge of the designing of the vast Colorado River Aqueduct system, and his work in solving the engineering problems that confronted the builders of that huge project has won him international acclaim. During the past several years, Mr. Hinds actively has assisted Mr. Weymouth in the administrative management of the District, in addition to his engineering duties.

In announcing the action of the Board, Vice Chairman Franklin Thomas stated:

"With the Colorado River Aqueduct scheduled to be ready to begin the delivery of water to the thirteen District cities on August 1, Mr. Weymouth has asked that he be retired as the administrative head of the District. Throughout the planning and building of the vast aqueduct system, Mr. Weymouth has been in charge, and his services have in a large measure made it possible for the District successfully to complete the building of the aqueduct, and to do the job at a cost $22,000,000 less than the original estimates. But the District urgently needs the services of Mr. Weymouth as a consultant in connection with many problems still before us, and he has consented to serve in that capacity.

"It is indeed fortunate that a man with the outstanding ability and experience possessed by Julian Hinds is available to take up the arduous duties of General Manager and Chief Engineer. He is thoroughly familiar with every phase of the District's work, and during the past several years has demonstrated his ability as an executive officer."

Director Creel Dies

Director Arthur P. Creel, who since January, 1937, has been Santa Monica's representative on the District Board of Directors, died suddenly on March 3 as a result of a heart attack. Mr. Creel for more than 20 years had been a prominent civic figure in Santa Monica, where he was engaged in the real estate business.

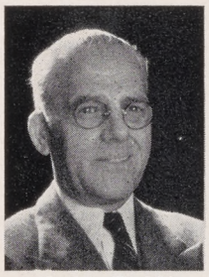
Mr. Samuel G. McClure, publisher of the Santa Monica Outlook, has been appointed to fill the vacancy created by Mr. Creel's death. Several years ago, when Mr. McClure was publisher of the Glendale News-Press, he represented Glendale on the Board.

Free Water

(*Continued from Page 2.*)

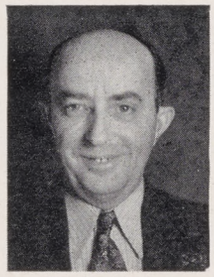
In the instance of Los Angeles, the District Board states that it will be prepared during the test period to deliver sufficient soft and filtered water to serve all the high service area in the northeast part of the city, or an equivalent quantity to be used by the Los Angeles Water Bureau wherever it may elect. Upon reasonable notice, the Board states, the District will be ready to deliver to Los Angeles its full quota of the initial capacity of the Colorado River Aqueduct. To other District cities the Board states that during the test period the District is prepared to deliver water in such quantities as the cities may require.

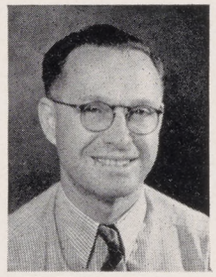
In this connection it is pointed out that the distribution system of the aqueduct initially to be placed in operation is not designed to carry the full ultimate capacity of the main aqueduct. This is because the consumption of aqueduct water, it is understood, will gradually increase during future years, and additional capacity will be provided as required.

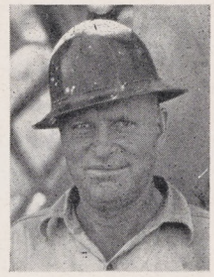

H. M. Wolflin


Robert M. Baughey


R. E. McGonagle


E. F. Miller


V. F. Van Wye


Rudolph Ferry

Aqueduct Alumni

Here are a few more of those who helped to build the Colorado River Aqueduct. It will be noted that many former aqueducters are now engaged in work on national defense. Since Southern California is the center of aircraft production, it is natural that we should find a good share of the aqueduct veterans now busy helping Uncle Sam turn out bigger and better fighting planes.

Jack Armstrong: Was, General Clerk, Berdoo tunnel camp; Accountant-bookkeeper, Div. 1. Now, with Lockheed Corp., Burbank, Calif.

Robert (Bob) Baughey: Was, Field Clerk and News Writer, Miscellaneous Activities Div. Now, Editor, California Conservationist, Department of Natural Resources, Sacramento, Calif.

N. I. Berg: Was, Chief Clerk, San Jacinto tunnel. Now, with Stone & Webster Engineering Co., Ontario, Calif.

Aileen Carmichael: Was, in Safety Div., Banning Field Hdqrs. Now, Stenographer, Lockheed Corp., Burbank, Calif.

Mrs. Hazel (Clark) Parsons: Was, in Accounting Div., Los Angeles Office; Stenographer, Banning Office. Now, Accounting Div., Lockheed Corp., Burbank, Calif.

Harris V. (Harry) Crawshaw: Was, Engineer, Distribution Div. Now, Office Engineer on Army construction work for Morrison-Knudsen Co., Paso Robles, Calif.

Herbert H. (Herb) Cutler: Was, Resident Engineer, Div. 1. Now, Engineer with W.P.A. in Los Angeles.

Douglas K. (Doug) Fagg: Was, Clerk Supervisor, Electrical-Mechanical Div. Now, Superintendent of Docks, Pearl Harbor, for contractors on naval defense works.

W. R. Farnsworth: Was, General Clerk, Compensation Claims Div. Now, insurance business, Los Angeles.

F. T. Fauble: Was, in Labor Employment and Personnel offices. Now, in employment office for contractors on naval defense construction on Pacific Coast Islands, Douglas Bldg., Los Angeles.

Rudolph Ferry: Was, Construction Superintendent, Little Morongo camp. Now, Tunnel Superintendent on Delaware Aqueduct, with Samuel R. Rosoff, Ltd., Kerhonkson, N. Y.

R. E. McGonagle: Was, Engineer on San Jacinto tunnel. Now, Engineer with Morrison-Knudsen Construction Co., Paso Robles, Calif.

E. F. (Ed) Miller: Was, Asst. Purchasing Agent, Purchasing Div. Now, Purchasing Agent for Bechtel-McCone-Parsons Corp., Orange, Tex.

T. W. (Tom) Osgood: Was, District's Safety Engineer. Now, Safety Engineer, Pennsylvania Turnpike tunnel, Harrisburg, Pa.

E. H. Riggs: Was, Purchasing Agent; Engineer, Electrical-Mechanical Div. Now, U. S. Army Engineers, Providence, R. I.

Snell Robertson: Was, Engineer, Electrical-Mechanical Div. Now, Engineer, Design Div., Lockheed Corp., Burbank, Calif.

Roy Scrivner: Was, in Public Relations work, Miscellaneous Activities Div. Now, Commissary Purchasing Agent, U. S. Navy construction camp, Honolulu.

W. D. Sheffey: Was, General Storekeeper at District's Indio Warehouse and at San Jacinto tunnel. Now, with Lockheed Corp., Burbank, Calif.

A. J. (Tony) Slanga: Was, in Accounting Div., Banning Field Headquarters. Now, Cost Accountant, Clayton Manufacturing Co., Alhambra, Calif.

Lester L. Taylor: Was, Mail Clerk, Mails and Files Div. Now, Head of Mails and Files, Lockheed Corp., Burbank, Calif.

Charles E. Van de Water: Was, Engineer, Electrical-Mechanical Div. Now, Engineer with Vultee Aircraft, Inc., Downey, Calif.

V. F. Van Wye: Was, Chief Engineering Clerk, San Jacinto tunnel. Now, with Lockheed Corp., Burbank, Calif.

Kenneth Volk: Was, Engineer, Design Div.; Engineer, Distribution Div. Now, Engineer with J. B. Lippincott, March Field.

G. J. Willson: Was, Chief Clerk, Coachella tunnels. Now, with American Section, International Boundary Commission, El Paso, Tex.

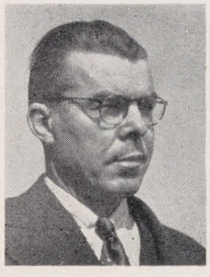
H. M. Wolflin: Was, Senior Engineer, Compensation Claims Div. Now, General Manager, Idaho Maryland Mines, Grass Valley, Idaho.


C. E. Van de Water

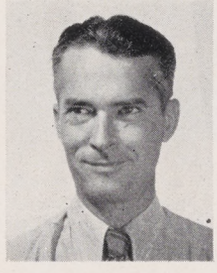

Doug Fagg

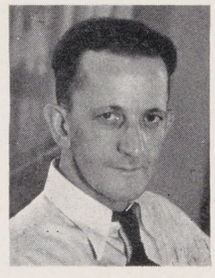

N. I. Berg


Roy Scrivner

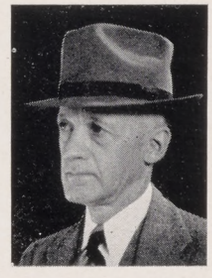

Snell Robertson


A. J. Slanga


Jack Armstrong


W. D. Sheffey


Herb Cutler


Tom Osgood

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in March, covering work done in February.

Miscellaneous Activities Division

During the month of February, 1941, 100 labor employment applicants were cleared for work on the aqueduct. Of this number 15 were made available for force account work and 85 were made available for aqueduct contractors. Identification certificates were issued to 55 applicants. The net turnover for all positions for January, 1941, was 1.42 per cent as compared with 0.83 for the same month in 1940.

Main Aqueduct

Salvage Division — Stock appraised and transferred to the Banning salvage yard to date amounts to $2,364,530.12. Sales during February amounted to $13,514.20. Total of salvage disbursements to date amounts to $1,532,651.48. The appraised value of stock on hand as of February 28, 1941, amounted to $648,410.79.

Parker Dam and Power Plant—The Bureau of Reclamation forces placed 6100 cubic yards of concrete. The draft tubes for units 3 and 4 were completed so that all four units are now ready for erection of scroll cases. The contractor for the steel penstocks completed unit 2, installed 30 per cent of pipe for unit 3, and started fabrication of Unit 4.

Electrical Engineering Division

Pumping Plants — The pumping plants were operated during the month only for testing and adjusting certain equipment.

Construction—Four of the new cottages at Gene were completed and the remaining three were 80 per cent completed at the end of the month. On the Lake Mathews-La Verne telephone line work was somewhat delayed on account of heavy rains. The conductor has been strung on the first two miles west of La Verne.

Civil Engineering Division

Design—Work was continued on details of the chlorinators, piping, and electrical equipment to be installed in the Palos Verdes and Orange County chlorination stations.

Specifications—Three sets of specifications were completed and issued during the month, including specifications No. 353 for synthetic zeolite. Bids were opened and abstracted, and recommendation for awards made on specifications No. 351 for lighting fixtures, and 352 for fence and gates, both for the water softening plant.

Hydrography—Meetings of the Colorado River Board of California were attended at which Colorado River basin and western water problems were discussed. Numerous requests from interested citizens and land owners for information on aqueduct and annexation matters were answered.

Distribution Division

Field and Office Engineering—In the field, lines and grades were given and quantities measured on all construction contracts in progress. In the office, checking of shop drawings and preparation of reinforcement steel lists were continued for unfinished schedules of the Santa Monica and Orange County feeders.

Contract Work — At the softening and filtration plant, the contractor's forces continued installation of piping and plumbing and of building hardware and fixtures; spread zeolite in the softeners, and were making a general clean-up of the area. All waste-water pipe line has been laid except 539 feet in the crossing of San Jose Creek.

On the Santa Monica feeder, the contractor finished pipe laying on Schedule 30SC, between Glendale and Burbank, and has lined all but about 1500 feet of the arch in Hollywood Tunnel. On the Orange County feeder, trench was excavated and pipe laid at three locations on Schedule 35P. The Morris Reservoir connection has been completed by the contractor except for a small amount of painting and the pressure and leakage tests.

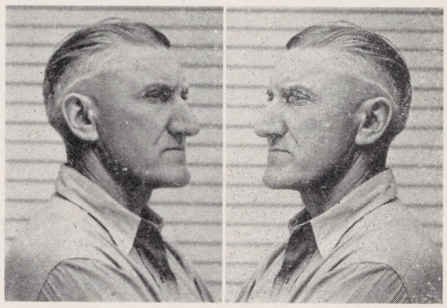
Purchasing Division

The total expenditure covered by 381 purchase orders issued by this division during the month of February, 1941, aggregated approximately $24,700.00. Carload forwardings totaled 24, of which 21 were cement.

Accounting and Costkeeping

The total cost of the work accomplished to February 28, 1941, was $190,269,295.14.

Mr. Davis One Too Many For Editor



V. T. Davis **Vern Davis**

A number of old-time aqueducters, not to mention Mr. Davis, himself, were somewhat flabbergasted when, as they perused the columns of the February issue of the Aqueduct News, they found under the heading of Aqueduct Alumni the following two items:

> **Vern Davis:** Was, General Foreman, Div. 2. Now, with Bureau of Reclamation, Parker Dam power plant.
> **V. T. Davis:** Was, Supt., Fargo tunnel camp; General Foreman, Iron Mt. pumping plant. Now, with Warner Construction Co., Kremmling, Colo.

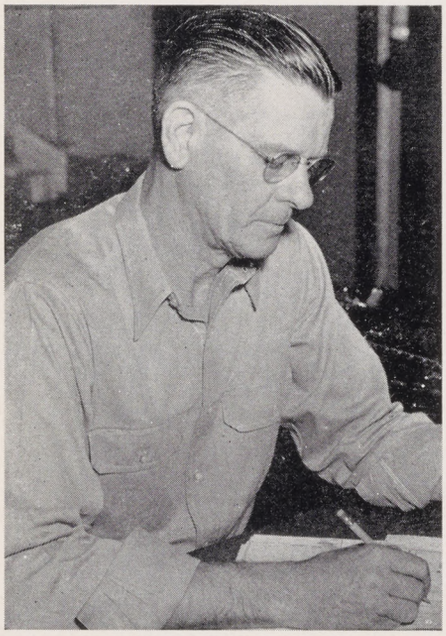
Now, it happens, strangely enough, that V. T. Davis and Vern Davis are one and the same individual.

It seems (here the editor tries to explain everything)—it seems, as we were saying, that in assembling the dope on Mr. Davis, in some way or another, there were two cards made out for this gentleman. On one he was listed as V. T. and on the other as Vern—that's what the V stands for.

On the card for Vern, the card makerouter entirely forgot that Mr. Davis, prior to being a General Foreman at Division 2, had been a Superintendent at Fargo tunnel camp. In making out his records for V. T., however, the historian went back and picked up Mr. Davis' employment record at Fargo, and just to add variety to the work, he now chose to refer to Division 2 as Iron Mountain pumping plant. (Fact is, Iron Mountain pumping plant is located at Div. 2.) Are you still with us?

Well, then—to continue. On one card, the Boswell of Mr. Davis listed as Mr. Davis' present employment a job in Colorado which Mr. Davis took over shortly after he left the District—and on the other card there was accurately given the job at Parker Dam power plant, which Mr. Davis is now actually holding down. Do we make ourselves clear?

NEWS FROM FIELD AND OFFICE



J. H. Mudgett, storekeeper at Division 1, is here found carefully checking the tabulation of the day's intake and outgo. Mudgett, in addition to his duties as storekeeper, handles the general clerical work at Division 1 headquarters, center of operations for such aqueduct features as Intake and Gene pumping plants and the Gene and Copper Basin reservoirs.

Chief Electrical Engineer Gaylord recently received a letter from Doug Fagg, formerly with the Electrical-Mechanical Division. Writing from Honolulu, where he is Superintendent of Docks for contractors engaged in the Pacific Naval Air Base construction work, Doug gives this information, of special interest to all present and former aqueducters.

"My job over here is to unload all the contractors' cargo from the mainland, distribute to the various local projects their material and put in our warehouse the cargo for the island projects. This we load in Navy boats for transshipment to its destination. We are now loading two big transports—one for Wake and one for Midway. . . .

"I see Si Perliter (formerly with M.W.D. Design Division) every now and then. He has two private secretaries—one comes on for 7 hours and then the relief girl comes on for 7 hours. He has also a very nice title, lots of authority and never less than 14 hours a day. He is Chief Engineer of Military Construction for the U.S.E.D. . . .

"Jim Swinford (formerly with M.W.D. Accounting Division) is second in command in the Accounting Division at Pearl Harbor. . . .

"Roy Scrivner (formerly with M.W.D. Miscellaneous Activities Division) is Purchasing Agent for the Commissary Dept., so I see him quite frequently as he has lots of foodstuff to ship to the various islands. We are fortifying Wake, Johnston, Guam, Samoa, Midway and two of the local group besides quite extensive projects in and around Pearl Harbor.

"I am getting the Aqueduct News regularly and enjoy it very much, although it makes me homesick. I generally can find some ex-aqueducter who is passing through on some ship that is very grateful for any copy on hand."

AQUEDUCT TEMPERATURES
Feb. 15, 1941, to Mar. 15, 1941

	Max.	Min.
Gene Pumping Plant	81°	45°
Iron Mt. Pumping Plant	78°	45°
Eagle Mt. Pumping Plant	80°	42°
Banning	72°	35°
Lake Mathews	77°	44°

Ranking as one of the original aqueducters, Del Laneville left the District several weeks ago, and is now engaged with the Macco Construction Co. He is in charge of material and cost work for the company on a job in San Diego. Del started work on the aqueduct project in April, 1926. For the past five years he was Field Clerk for the Distribution Division.



Wizard of the air waves, Gus McGinnis, Station Chief at Iron Mountain pumping plant. He owns and operates amateur radio station W6-NIZ, operating under 400 watts of power on a 75 meter band. It is said to be the most powerful amateur radio station on the Colorado River desert.



Rolland G. Palstine

After ten years of service with the District, Rolland G. Palstine recently resigned as Office Engineer in the Distribution Division and accepted a position as Engineer on defense work for the R.F.C. His new office is located in San Diego, Calif.

* * * *

Word has reached the Los Angeles offices of the District that Capt. Chas. J. Brandt, who before he entered active military service was boss man of the Mails and Files Division, has entered the state of matrimony. While with the District Charlie was generally conceded to be one of the few eligible bachelors in the District organization. But wait—no wise cracks about the gals in the District office—Capt. Charlie wound up by marrying a former District employee. The bride before her marriage was Miss Eleanor Ely of Los Angeles. Capt. and Mrs. Brandt are now residing in Wilmington, North Carolina. The Captain is stationed at Camp Davis.

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Indexes for the 1940 volume of the Colorado River Aqueduct News have been received from the printer. News readers who are maintaining files of the News may obtain these indexes by writing to or calling at the District's formation office in Los Angeles.

Soft Water

(*Continued from Page 2.*)

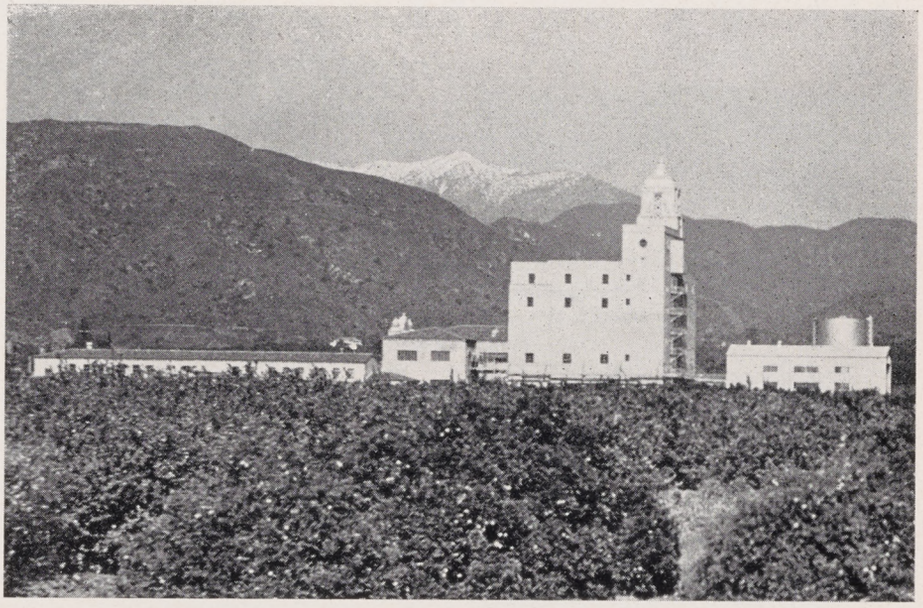
most care is taken to eliminate those dissolved substances which might be harmful. Chemical processes make use of exact amounts of materials of known quality and the addition of other unwanted chemicals in the water supply may cause trouble.

In the manufacture of soft drinks water quality must be carefully controlled or the product may taste different in one locality than it does in another. Food products may be affected in the same way.

Laundries and other industries using soap in washing operations suffer from the use of hard water both in actual cost of soap, etc. and in the quality of workmanship. Again, just ask your wife.

It is difficult to describe adequately the District's softening plant. Everyone is invited and urged to visit the plant and see it in operation after it goes into regular service next summer. A brief description of the process, however, might be of interest.

Water is carried to the plant through an 11′-8″ diameter concrete conduit. As it enters the head house it is measured by a meter which also controls all of the chemical feeders keeping the chemical feed in step with the flow. The chemical feeders are located in the head house directly above the channels through which the water flows. Lime is the principal chemical used and is employed to precipitate the carbonate hardness from the water.



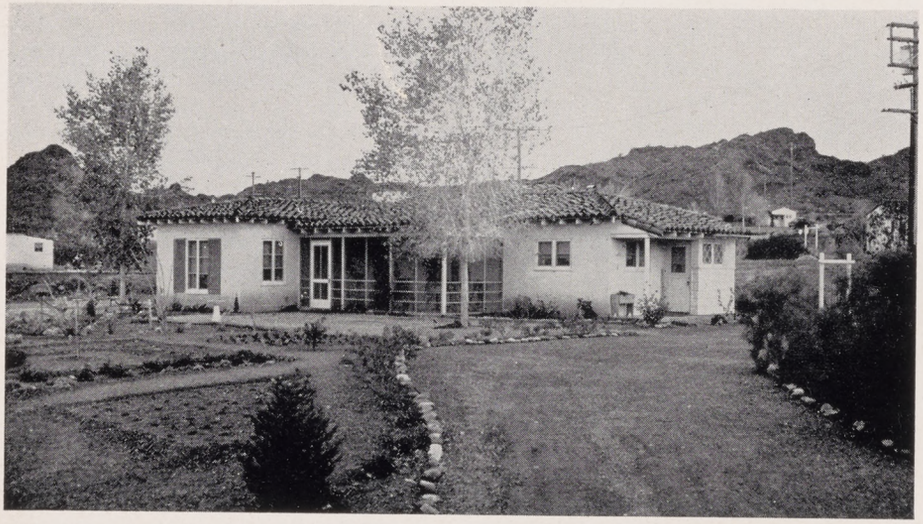
A recent photograph of a portion of the Softening and Filtration Plant, looking northwest. In the foreground is seen a portion of the orange grove which surrounds the plant. In the center is shown the zeolite building, administration building and head house, and the lime receiving building. In background is the snow-capped peak of Mt. Baldy.

After the addition of the lime the water flows past flash mixers which thoroughly diffuse the chemical through the water. Then through a concrete channel the water flows to basins equipped with horizontal shaft agitators which impart a gentle rolling motion and thereby hasten the precipitation of the carbonate hardness. The time of mixing is one half hour at plant capacity.

After settling, the water is filtered through sand in order to remove the last traces of suspended solid matter. Twelve filter units have been provided, each controlled from its own operating table by means of four-way valves connected to hydraulically operated gate valves. When the filters become clogged from material gradually accumulated on the surface of the sand, means are provided for cleaning the beds by backwashing with filtered water. The water used for backwashing is not wasted but is collected and again put through the purification process.

After filtration the water is divided into two portions, one of which is carried back through the head house without further treatment. The other portion is first carbonated to reduce the alkalinity and is then allowed to flow through zeolite softeners to further reduce the hardness. The hardness which is removed with zeolite cannot be removed with lime.

The zeolite which will be used in the plant is a synthetic material which has the property of exchanging its sodium content for the calcium and magnesium contained in water. All that is necessary for softening is to allow the water to flow through a bed of zeolite and the hardness will be removed completely. When the softening capacity has been exhausted, the zeolite is then regenerated with common salt. Since it is not considered necessary to remove all of the hardness from the water, only a portion need be passed through the zeolite where the hardness is reduced to zero.



View of a typical permanent cottage occupied by one of the operators at Gene pumping plant. Cottages of this type have been built by the District at Gene, Iron Mt., Eagle Mt. and Hayfield pumping plants, and are rented by the families of the District employees working at the plants.